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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/468,085	12/21/1999	MINORU MIYATAKE	Q57340	3194

7590 04/23/2003
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EXAMINER

CHUNG, DAVID Y

ART UNIT PAPER NUMBER

2871

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/468,085

Applicant(s)

MIYATAKE ET AL.

Examiner

David Y. Chung

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Ouderkirk et al. (U.S. 5,825,543). Ouderkirk et al. discloses an optical film where the index of refraction of continuous and disperse phases are substantially matched along a first orthogonal axis and substantially mismatched along a second orthogonal axis. The indices of the two regions differ by no more than 0.03 in the matched regions and differ by at least 0.07 in the mismatched regions. This type of scheme provides a high degree of control in providing optical bodies of consistent and predictable high quality performance. See column 7, lines 30 – 37. The range claimed by applicant for the length of the dispersed liquid crystal polymer particles is very broad and virtually non-limiting. The length of conventional liquid crystal polymer particles is well within this range. Furthermore, the chemical composition of the thermoplastic liquid crystal polymer as recited in claim 2 was well known and obvious for showing liquid crystal characteristics within a predetermined temperature range as evidenced by the disclosure of Hiji et al. (U.S. 5,953,089). See column 4, lines 55-67 and note the

Art Unit: 2871

chemical formula of the liquid crystal polymer. It would have been obvious to one of ordinary skill in the art at the time of invention to use this liquid crystal polymer in the optical film of Ouderkirk et al. because it exhibits liquid crystal characteristics within a specific temperature range.

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are not persuasive. In response to applicant's argument that Ouderkirk et al. does not teach the particle length as claimed, examiner notes that the upper and lower extremes of this range (0.05 to 500 μm) are entirely outside the realistically usable range for light-diffusing layers. It would be an absurdity for a light-diffusing layer to have particles with a length smaller than 0.05 μm because the particles would be too small to scatter light. It would be an absurdity for a light-diffusing layer to have particles with a length larger than 500 μm because these particles would be visible to the naked eye. Therefore, this range, which encompasses several orders of magnitude, is non-limiting as previously stated. See Tables 1-5 of Tsuyoshi (U.S. 5,995,183) for typical light-scattering particle sizes. As to applicant's argument that there is no motivation for using thermoplastic liquid crystal in Ouderkirk et al., examiner notes that it was obvious to do this because thermoplastic liquid crystal exhibits liquid crystal characteristics within a specific temperature range as previously stated, and therefore, its behavior was very predictable.

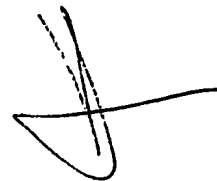
Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.

David Chung
GAU 2871
04/18/03



Kenneth Parker
Primary Examiner
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